In the Claims

1. (Currently amended) A device for fluorescence correlation spectroscopy, comprising a vessel holder in which at least two sample vessels with a focussing reflection-coated bottom are provided, and a transparent medium in each sample vessel and a common cover for both sample vessels which is at least partly transparent to light, wherein light rays impinging upon ~~a~~ the transparent medium located in each sample vessel are reflected and focussed by the focussing reflective-coated bottom of said sample vessel to a focal point within said sample vessel.

2. (Previously presented) The device according to Claim 1, wherein the sample vessels are formed by recesses in the vessel holder.

3. (Previously presented) The device according to Claim 1, wherein the common cover comprises at least two light windows for directing the impinging light rays into each sample vessel, wherein said light windows are wetted by or immersed in the transparent medium in the sample vessel.

4. (Previously presented) The device according to Claim 3, wherein said light windows are formed by plungers that each protrude into a sample vessel.

5. (Previously presented) The device according to Claim 4, wherein at least one plunger has dimensions such that between the plunger and the sample vessel there remains a gap surrounding the plunger for pressure equalization within the vessel.

6. (Previously presented) The device according to claim 4, wherein at least one plunger has a surface region perpendicular to an optic axis of the focussing bottom of the sample vessel.

7. (Currently amended) The device according to claim 1, wherein ~~the~~ a wall of the sample vessel has an opening which opens into a supply and/or drain pipe for the transparent medium.

8. (Previously presented) A method for fluorescence correlation spectroscopy, comprising:

providing a sample vessel having a reflecting and focussing bottom and containing a transparent medium therein;

impinging light rays upon the transparent medium located in the sample vessel,

wherein the impinging light rays are reflected and focussed by the reflecting and focussing bottom of said sample vessel to a focal point within said sample vessel.

9. (Previously presented) The method according to Claim 8, wherein the impinging light rays are directed into said sample vessel through a light window that is wetted by or immersed in the transparent medium.

10. (Previously presented) The method according to Claim 9, wherein said light window is formed by a plunger protruding into the sample vessel.

11. (Currently amended) The device according to claim 4, each plunger protrudes into the sample vessel to a position above the focal point within ~~of the bottom of~~ said sample vessel.

12. (Previously presented) The device according to claim 6, wherein the impinging light rays are aligned perpendicular to said surface region of the plunger.

13. (Previously presented) The method according to claim 10, wherein the plunger protrudes into the sample vessel to a position above the focal point of the bottom of said sample vessel.

14. (Previously presented) The method according to claim 10, wherein the plunger has a surface region perpendicular to an optic axis of the bottom of the sample vessel, and wherein the impinging light rays are aligned perpendicular to the said surface region of the plunger.